

VULNERABILITY ASSESSMENT RESULTS SHEET

717278

DOE/CONTRACTOR COMPONENT Oak Ridge Associated Universities

ASSESSABLE UNIT Biological & Environmental Research

RELATED HEADQUARTERS OFFICE Office of Energy Research
PROGRAM LEVEL B&R NO. HA 02

1. BRIEF DESCRIPTION OF PROGRAM OR ADMINISTRATIVE FUNCTION: This program supports research to develop information required for a comprehensive understanding of the various processes of production and utilization of energy. It encompasses a broad effort to gain an understanding of the interaction of radiation and other energy-related pollutants with living organisms and ecosystems. The specific programs included in our vulnerability assessment were:

- 1. Health and Mortality Studies (HA 02 01) \$2,435K for FY-84, 28 MY. This study is to evaluate on a continuing basis the disability and mortality experience of persons with a history of employment in selected installations associated with nuclear energy research and development. The primary purpose of the study is to determine if such employment histories are associated with an increase in age, sex-specific mortality in general, or with selected causes of death. Some determinant factors to be studied are: The adequacy of comparison populations to predict the expected mortality experience of the defined study population; the type, level, and dose rate of radiation exposure of the study population; and the length of time elapsed from first employment in a nuclear industry to morbidity and mortality.

Support activities of the study are:

- DOE/Death Certificate Retrieval Office
- DOE/Data Processing Support
- DOE/SSA Data Searches for Health and Mortality Studies
- Human Health Studies and Evaluations

- 2. Radiation Emergency Assistance Center/Training Site (HA 02 01) \$1,007.5K for FY-84, 13.5 MY. The overall objective of this program is to assure and improve medical care and treatment of persons injured in radiation accidents. Fulfilling this objective involves the use of a special treatment facility equipped to treat radioactively contaminated patients properly; to handle, in conjunction with the staff at Oak Ridge Hospital, radiological emergencies for the DOE nuclear worker population locally as well as outside the Oak Ridge area; provide training and support of nation-wide distributed personnel in radiation accident preparedness; provide follow-up of accident survivors through a formed registry system

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which also includes all U.S. cases of occupational over-exposed and DTPA-treated cases for plutonium contamination; to develop improved diagnostic and therapeutic methods for the medical care of persons contaminated or injured in radiation accidents; and to provide biological radiation dosimetry through cytogenetic methods and apply these methods to detect chromosomal changes secondary to toxic agents in occupational (energy production) environments.

3. DTPA Chelation Therapy (HA 02 01) \$52.5K for FY-84, 0.85 MY. The objective of this program is to provide guidance in the safe clinical usage of DTPA drugs and in the development of new chelating drugs for decorporation of occupationally acquired transuranic contaminants. The program provides for DOE/Human Health and Assessment Division management of the IND's for Ca- and Zn-DTPA and, through the DTPA Registry, evaluates the clinical usefulness and safety of these drugs. It is responsible for submitting to FDA through DOE IND modifications and new IND applications. Promising research leads for improving chelation therapy are monitored, evaluated and, in some cases, tested experimentally.
4. Former Patient Care (HA 02 01) \$50K for FY-84, no staff allocation. The objective of this program is to provide funds for nonrecoverable medical expenses of former patients of the Medical and Health Sciences Division's in-patient program which was terminated in October 1974. This program is necessary to meet AEC/ERDA/DOE commitments to provide medical services and patient care to these former patients.
5. Late Somatic Effects of Energy Pollutants (HA 02 02) \$24K for FY-84, 0.1 MY. The objective of this program is to determine the longevity of heavily irradiated burros and to learn whether radiation-induced late somatic effects (such as oncogenesis) cause life shortening in a long-lived domestic animal.
6. Alterations in Lipids and Membranes by Environmental Toxicants (HA 02 02) \$446K for FY-84, 7.12 MY. The objective of this program is to determine the role of lipids as cell mediators and membrane constituents in respiratory, neoplastic, cardiovascular and inflammatory diseases with the development and use of fossil fuels as energy sources. Emphasis in the experimental approach is on delineating biochemical mechanisms at the molecular, organelle and cellular level and to relate these results to physiological or pathological processes that occur in vivo.
7. HBCU Faculty and Student Research Participation Program (HA 02 02) \$100K for FY-84, 0.20 MY. This program provides support to faculty and students from Historically Black Colleges and Universities (HBCU) for training and collaborative research participation opportunities in biological and environmental programs at DOE sites.
8. Laboratory Graduate Participation/CO2 (HA 02 05) \$6K for FY-84, no staff allocation. This program provides support for participation by graduate students in carbon dioxide research.

9. Review of CO2 Research Staffing and Academic Support (HA 02 05) \$45K for FY-84, 0.45 MY. This program supports a review of the current status and potential future direction of staffing requirements and academic support programs of DOE, taking into account carbon dioxide and related research supported by other government agencies and the private sector. The phase I work will provide: preliminary estimates of quantitative and qualitative manpower implications for senior and junior researchers, postdoctorates, and graduate and undergraduate students by research category; a review of existing evidence about the adequacy of supply for the disciplines appropriate to carbon dioxide and related research; a review of the existing literature about the effects of various programs to stimulate student enrollments and participation in specific areas; and a description of alternative approaches that might be used to enhance DOE's academic research support programs and future manpower pool.

10. Carbon Dioxide Research (HA 02 05) \$367K for FY-84, 4.25 MY. This program supports research in the area of the behavior and effects of carbon dioxide released from fossil fuel combustion including research on (a) future levels of atmospheric carbon dioxide and projections of future fossil fuel use and the uptake and redistribution of released carbon dioxide in the oceans and the terrestrial biosphere; (b) climatic effects of increasing atmospheric concentrations of carbon dioxide including effects on the physical, chemical, and biological characteristics of the oceans and effects on the extent of the cryosphere; (d) social, political, and economic costs of environmental changes; and (e) strategies and technological methods for ameliorating the consequences of carbon dioxide effects. The specific activities at ORAU are:
 - (a) Modification and Use of Energy/Carbon Dioxide Emissions Model;
 - (b) Impact of Future Energy Systems on Atmospheric Carbon Dioxide;
 - (c) Development of Carbon Dioxide Emissions Data from Global and National Fuel Data.

11. Nuclear Medicine Applications (HA 02 07) \$493K for FY-84, 7.24 MY. This program supports research on developing beneficial applications of nuclear medical procedures to improve our understanding of diseases of the respiratory tract, the digestive system, and the brain. Diseases which are thought to be largely environmentally and occupationally derived are emphasized. In addition to investigating how physiologic and metabolic processes can be studied through the use of radioactive labels on natural metabolites and drugs to detect and diagnose pathophysiologic states, the group has the expertise and physical facilities for the pre-clinical and clinical development of radiopharmaceuticals. Cooperative arrangements with the staffs of area hospitals provide outpatients for the clinical studies. For convenience in scientific organization and definition of inter-group responsibilities, this program is structured in the following areas:

(a) Preclinical Development of Radiopharmaceuticals: This program approaches the problem of early detection of disease processes in man through the development of new radiopharmaceuticals that can be used to study organ and cellular function. Emphasis is placed on agents labeled with positron-emitting radionuclides, e.g., 11 C, 68 Ga, 64 Cu, and 18 F. These agents are used to study malignant and non-malignant diseases of the intestinal tract, lung, brain and cardiovascular system utilizing positron tomography. This group has the overall responsibility for 1) development of chemical synthetic and rapid hot-cell production methods; 2) investigation of the tissue distribution, toxicity and mechanism of action of potential new radiopharmaceuticals in animals; and 3) the supply of these new agents for clinical trials.

(b) Clinical Development of Radiopharmaceuticals: In these studies radiopharmaceuticals and new medical instruments are investigated for potential research and clinical applications in an effort to develop new and improved diagnostic procedures in nuclear medicine. Emphasis is placed on pathophysiologic changes characteristic of the diseases of the respiratory and gastrointestinal tract. Computer techniques for quantitative image analysis are an integral part of this program which has inter-group responsibility for clinical trials (Phase I and II studies) with new radiopharmaceuticals developed in Preclinical Development of Radiopharmaceuticals.

12. Radiopharmaceutical Internal Dose Information Center (Ha 02 07) \$108K for FY-84, 2.6 MY. This program provides support work in analyzing data and provides information concerning internal radiation dose to DOE, DOE contractors, medical researchers, and others. To aid the process of collecting, analyzing and correlating information used to estimate radiation dose from radioactive materials within the body, the Center abstracts internal dose information from the scientific literature and maintains a bibliographic data base devoted to internal dose. The Center also develops mathematical models and computer programs needed for internal dose calculations, analysis of biological distribution patterns, and uptake and retention of radionuclides.

2. APPROACH:	Senior Officials	Titles:
	William E. Felling	Executive Director
	William F. Countiss	Manager of Finance
	Kenneth E. Flatt	Manager of Administration

Team

Titles:

Harold Hatmaker

Head, Management Services

Head of Division or office where program/function is prepared

Program Manager for individual program/function

- 3. **SCOPE:** Consideration given to inherent risk and control features existing for this function. This included personnel, scope of responsibility, organizational checks and balances, administrative controls, established procedures, and prior management reviews.
- 4. **AUDIT AND MANAGEMENT REPORTS CONSIDERED:** See attached listing.
- 5. **RESULTS OF VULNERABILITY ASSESSMENT:** High Moderate Low
- 6. **BASIS FOR OVERALL RATING.** Strong management and organizational controls are in place. Also, centralized functions such as purchasing, payroll, accounting, auditing, personnel, safety, etc., provide built-in controls to monitor functions. There is limited opportunity for fraud or abuse.
- 7. **PLANS AND COMMENTS:** Plans include the establishment of event cycles, control objectives and control techniques by March 1986.

Performed by: Harold Hatmaker Signature Harold Hatmaker Date 8/29/84

Reviewed by: William Countiss Signature William F. Countiss Date 8/29/84

Approved by: William Felling Signature William F. Felling Date 8/29/84

OAK RIDGE ASSOCIATED UNIVERSITIES

Audit, Program and Management Reports Considered
in 1984 Vulnerability Assessment

<u>Title</u>	<u>Date</u>	<u>Issuing Organization</u>	<u>Report No.</u>
Financial and Compliance Audit for FY-83	6-12-84	Office of Inspector General (Sub-contractor - Quezada Navarro & Co CPA's)	ER-LC-84-4
Annual Audit Report - Financial Statements and Supplemental Data	10-29-82 11-4-83	Coopers and Lybrand - Certified Public Accounting Firm	
Annual Management Letter (Evaluation of Internal Controls)	10-29-82 11-4-83	Coopers and Lybrand - Certified Public Accounting Firm	
Survey - Economy, Efficiency and Program Results	No report	Office of Inspector General - Completed June 1984	
Financial Management Appraisal Report	9-3-82 11-1-83	Contract Administrator, DOE/ORO	
Employee Annual Performance Evaluations	Annually	ORAU Fiscal Services - All staff	
ORO Contract Administrator Annual Performance Evaluation Report (FY-83)	12-23-83	Contract Administrator - DOE/ORO	
Appraisal of Budget Activities FY-84	8-13-84	Office of Planning and Budget DOE/ORO	
ORAU Council Annual Program Reviews	Annually	ORAU Council Committees	
Appraisal of Property Management Activities FY-84	5-2-84	Supply Division DOE/ORO	
Industrial Safety and Fire Protection Appraisal	2-11-84	DOE Environmental Health and Safety Division	
DOE/OSHA Safety Inspection	8-84	Office of Safety and Health Administration	
Transportation Management Appraisal	12-84	DOE Transportation Branch	
Inspector General Telecommunication Review	5-25-84	Inspector General	ER-L-84-4
Hazardous Waste Audit	7-84	State of Tennessee	
Fire Inspection	Various	City of Oak Ridge	
DOE Health and Environmental Research Advisory Subcommittee	5-21-23,84	Advisory Subcommittee	
Historically Black Colleges & Universities Advisory Committee Review	3-20-84	HBCU Advisory Committee	

QUESTIONNAIRE FOR
EVALUATING GENERAL CONTROL ENVIRONMENT

DOE/CONTRACTOR COMPONENT Oak Ridge Associated UniversitiesASSESSABLE UNIT Biological & Environmental Research - HA 02

QUESTIONS	RESPONSE		COMMENTS
	YES	NO	
A. <u>Management Attitude</u>			
1. Is management aware of existing control objectives and control techniques and their effectiveness?	X		
2. Does management recognize the importance of the establishment and maintenance of strong internal controls and is their commitment communicated in writing?	X		
3. Does management actively participate in the evaluation and improvement of internal controls?	X		
4. Does management systematically monitor the performance of internal control responsibilities of subordinates?	X		
5. Does management cultivate positive attitudes in regard to the internal control process?	X		
6. Does management follow up and correct audit and other reported deficiencies in timely manner?	X		
7. Do personnel perceive management to be interested in the importance of internal controls?	X		
8. Does management enforce prescribed procedures established by the Internal Control System?	X		
9. Do employees seek shortcuts or attempt to avoid necessary but unpleasant routine?		X	
10. Do management and employees seem to have an appreciation for the benefits to be derived from the Internal Control System?	X		
11. Does management readily accept suggestions for improvement of the system and implement the suggestions where feasible?	X		

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QUESTIONS	RESPONSE		COMMENTS
	YES	NO	
12. Is it management's policy to employ competent individuals and to give training where feasible?	x		
<u>B. Organizational Structure</u>			
1. Does the organizational unit have clearly defined written goals and objectives?	x		
2. Does the organizational unit have authority, responsibility, and resources to achieve its goals and objectives?	x		
3. Is the organizational unit held accountable for the results of its operations?	x		
4. Are reporting and responsibility relationships well defined, documented and operationally effective?	x		
5. Is the organizational unit sufficiently flexible to accommodate change?	x		
6. Are there clearly defined job descriptions which relate to accomplishing the organization's goals and objectives?	x		
7. Does a current organizational chart exist?	x		
8. Does the organizational unit have a manual which includes:			
a. A listing of information originating with each individual, and supporting documents?	x		
b. A statement as to each employee who has authority to commit assets?	x		
c. A mission statement for the organizational unit?	x		
d. A mission statement for each division?	x		
e. A statement of statutory authority?			N/A

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QUESTIONS	RESPONSE		COMMENTS
	YES	NO	
C. Personnel			
1. Do personnel exhibit high standards of integrity?	x		
2. Are personnel adequately competent by experience, training, or education to accomplish their assigned duties?	x		
3. Are periodic performance reviews of all employees scheduled and performed?	x		
4. Are there accurate and up-to-date position descriptions and performance (competency) standards?	x		
5. Is there a training program in effect to improve competence and to keep personnel current?	x		
6. Are staff turnover and/or vacancy rate low?	x		
7. Are personnel fully aware of their assigned duties and responsibilities?	x		
8. Does management have knowledge of the objectives of an internal control system and convinced of its value to the organization?	x		
9. Does management know the capabilities of each employee, functions performed by each and the impact of each employee on the objectives of the organization?	x		
10. Do employees know their own job and that of every other employee under him or her?	x		
11. Do employees understand reasons for the control procedures that they are required to follow?	x		

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QUESTIONS	RESPONSE		COMMENTS
	YES	NO	
D. <u>Delegations & Communications of Authority & Responsibility</u>			
1. Do delegations of authority to appropriate management levels exist in writing?	x		
2. Do delegations of authority clearly delineate duties and responsibilities?	x		
3. Do delegations of authority include sufficient authority to effectively carry out responsibilities?	x		
4. Are delegations of authority made as to preclude overlapping and duplication of responsibilities?	x		
5. Are the conditions under which the delegated authority may or may not be exercised spelled out clearly in writing?	x		
6. Are appropriate managers fully aware of and do they clearly understand the delegations of authority and responsibilities made to them?	x		
E. <u>Budgeting and Reporting</u>			
1. Have specific goals and objectives been established in writing?	x		
2. Are the goals and objectives communicated to responsible line and operational personnel?	x		
3. Does management develop long- and short-range plans and relate such plans to budgets and budget requests?	x		
4. Are results of operations systematically monitored against plans and budgets and variations investigated?	x		
5. Are reporting systems integrating financial, program, and other data utilized to effectively inform management at all levels of results of activities?	x		
6. Are reports timely, accurate and reliable?	x		
7. Are report and data base contents periodically substantiated and evaluated?	x		

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QUESTIONS	RESPONSE		COMMENTS
	YES	NO	
F. <u>Organizational Checks and Balances</u>			
1. Are responsibilities for assigned duties segregated so that no single individual can control a transaction from beginning to end?	x		
2. Are recordkeeping and documentation periodically reviewed and kept adequate?	x		
3. Are approval or review levels for transactions appropriate for risks inherent transactions being accomplished?	x		
4. Has there been an audit of significant portions of the program/administrative activity in the past three years?	x		
5. Are there regular management reviews to ensure that policies and procedures are efficient and effective in accomplishing the mission?	x		
6. Has management provided for segregation of duties so that the work of one employee or office is checked by another without duplication?	x		
7. Are management reviews a part of the ongoing operations?	x		
8. Has the authority to authorize transactions been separated from custody of the related assets?	x		
G. <u>ADP Considerations</u>			
1. Are supervision and review of operations adequate to ensure that ADP input, output and distributing of reports are accomplished only by authorized personnel accordance with prescribed procedures and policies?	x		
2. Are duties segregated to ensure that no individual/office performs more than one of the following operations:			
a. originating data		x	Except where the operating staff and the usage of ADP are small
b. inputting data		x	
c. processing data		x	
d. distributing data		x	
e. reviewing output		x	

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QUESTIONS	RESPONSE		COMMENTS
	YES	NO	
G. <u>ADP Considerations (Continued)</u>			
17. Are output reports reviewed critically by supervisory personnel in user departments as to general reasonableness and quality in relation to prior periods?	x		
18. Are batch controls over dollars and/or number of items established by user department prior to the submission of source documents for transcription?	x		Where appropriate
19. Are procedures prescribed to assure that transactions are transmitted to and received by the data processing department (e.g., the use of prenumbered forms, document counts, etc.)?	x		Where appropriate
20. Are controls maintained to insure that all batches are ultimately balanced and the corrections properly made and reentered into the system?	x		
21. Are the controls adequate to readily identify rejected transactions to prevent reentering into the system?	x		
22. Are transaction listing, available on a regular basis or on demand, prepared early in the processing cycle to facilitate research and to meet other control requirements?			N/A
23. Is full data validation and editing performed on all files interfacing with the application?	x		
24. Are controls in place to prevent overriding or bypassing data validation and editing problems?	x		
25. Are maintenance of and access to the files from terminal devices controlled?	x		
26. Is message content validated before displaying, writing, or printing on the terminal output device?	x		
27. Do terminal devices need to be logged off at the end of the day or when not in use so that they will be disconnected from the computer-based system?	x		Automatic disconnect in some cases

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QUESTIONS	RESPONSE		COMMENTS
	YES	NO	
H. Policies & Procedures			
1. Are current policies and operating procedures clearly stated in writing and systematically organized in manuals, handbooks, or other publications?	x		
2. Are policies and procedures systematically communicated through the organization?	x		
3. Are written policies and procedures readily available to all appropriate personnel?	x		
4. Are written policies and procedures direct and understandable?	x		
5. Do personnel at all levels understand the organizational unit's policies and procedures?	x		
6. Are policies and procedures systematically revised and updated as necessary?	x		
7. Do policies and procedures provide for documentation of every transaction?	x		
8. Are policies and procedures consistent with applicable laws, regulations, and policies prescribed by higher levels?	x		
9. Are internal control objectives and techniques identified as such in manuals, handbooks, or other publications?		x	Will be in place by March 1986

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QUESTIONS	RESPONSE		COMMENTS
	YES	NO	
1. Other Factors			
1. Does information flow only to those who have a need to know?	x		When formal reports are distributed
2. Is every transaction supported by documentation?	x		
3. Are documents sequentially numbered?	x		
4. Are documents sufficiently duplicated?	x		
5. Is responsibility for collecting, comparing, etc., documents flowing from different directions clearly defined?	x		
6. Do authorizations and/or approvals appear on all appropriate documents?	x		

Performed by: Harold Hatmaker Signature *Original Signed By*
Harold Hatmaker Date AUG 29 1984

Reviewed by: William F. Countiss Signature *Original signed by*
WILLIAM F. COUNTISS Date AUG 29 1984

Approved by: William E. Felling Signature *Original signed by*
WILLIAM E. FELLING Date AUG 29 1984

ANALYSIS OF GENERAL CONTROL ENVIRONMENT

DOE/CONTRACTOR COMPONENT Oak Ridge Associated Universities

ASSESSABLE UNIT Biological & Environmental Research - HA 02

FACTOR	EVALUATION	
	SATISFACTORY	OTHER
Management Attitude	x	
Organizational Structure	x	
Personnel	x	
Delegation, Communication Of Authority And Responsibility	x	
Budgeting and Reporting	x	
Organizational Checks And Balances	x	
ADP Considerations	x	
Policies and Procedures	x	
Other Factors	x	

Overall Evaluation: Satisfactory Other

Original Signed By

Performed by Harold Hatmaker Signature Harold Hatmaker Date AUG 29 1984

Original signed by

Reviewed by William F. Countiss Signature WILLIAM F. COUNTISS Date AUG 29 1984

Original Signed By

Approved by William E. Felling Signature WILLIAM E. FELLING Date 8-29-84

QUESTIONNAIRE FOR
EVALUATING INHERENT RISK

DOE/CONTRACTOR COMPONENT Oak Ridge Associated UniversitiesASSESSABLE UNIT Biological & Environmental Research - HA 02

QUESTIONS	RESPONSE		COMMENTS
	YES	NO	
A. <u>Purpose and Characteristics</u>			
1. Are legislative authority or regulations broad or vague?	x		Authority is broad but not vague
2. Are legislative authority or regulatory requirements cumbersome?	x		In the Health & Mortality Studies
3. Are missions, goals or objectives broad or vague?	x		In the Health & Mortality Studies
4. Do operations entail a high degree of complexity?	x		Technically or administratively complex but not from vulnerability viewpoint
5. Are there activities operating under severe time restrictions?	x		In certain programs (milestones)
6. Are there activities involving the handling of cash receipts?	x		In training courses REAC/TS
7. Are there cash like instruments which may be converted and realized in cash or utilized for personal benefit?		x	
8. Are there activities involving:			
a. approval of applications	x		
b. granting of authority	x		
c. certifications	x		
d. issuance of licenses or permits		x	In certain projects
e. inspections	x		
f. enforcement?	x		
B. <u>Budget Level</u>			
1. Are there relatively large amounts of budget allocation to this program/administrative function?	x		On some projects
2. Are there controlled areas of significant dollar value (i.e., property management function, loan guarantees) which are not measured by budget level?		x	
3. Is there a large amount of staff resources allocated to this program/administrative function?	x		In certain projects, especially in replacing departed personnel
4. Are there significant revenues collected?		x	

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QUESTIONS	RESPONSE		COMMENTS
	YES	NO	
C. <u>Procurement and Assistance</u>			
1. Are contract agreements: a. numerous b. involved or complicated?	x	x	In some projects
2. Is the dollar amount of the average transaction large?	x		In some projects
3. Are contract agreements frequently adjusted?		x	
4. Are there significant controls in place to measure the contractor/recipients progress?	x		
5. Does the type of contract agreement reduce DOE's direct control over program execution?		x	
D. <u>Impact Outside The Agency</u>			
1. Is there significant impact of the administrative function outside the agency (i.e., activities such as issuance registrations or permits, standard setting rate making, and licensing)?		x	
2. If yes, is the outside impact: a. financial b. non-financial internal controls?		x	
E. <u>Age and Life Expectancy</u>			
1. Has the program/administrative function been in existence for less than two years?		x	
2. Has the program/administrative function recently, or is it presently, undergoing substantial modification or reorganization?		x	
3. Is the program/administrative function phasing out within two years?		x	Except some indivisual projects may be phased out

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EVALUATING INHERENT RISK

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QUESTIONS	RESPONSE		COMMENTS
	YES	NO	
F. <u>Degree of Centralization</u>			
1. Daily operations can be managed on a centralized, decentralized, or participant administered basis. Could operations be more effectively controlled if a different degree of centralization were utilized?		X	
G. <u>Special Concerns</u>			
1. Has the program/administrative function been the focus of special attention (i.e., media attention, litigation, deadlines set by legislation, or special interest exhibited by the President, Congress, OMB, or the Secretary)?		X	
H. <u>Prior Reviews</u>			
1. Have significant portions of the administrative function not been audited or similarly reviewed within the last three years?		X	
2. Has audit or review coverage resulted in repeated and/or significant findings?		X	
I. <u>Management Responsiveness</u>			
1. Has management taken actions on matters brought to their attention by IG, GAO, or other evaluation groups?	X		

Performed by Harold Hatmaker Signature Harold Hatmaker Date AUG 29 1984

Reviewed by William F. Countiss Signature WILLIAM F. COUNTISS Date AUG 29 1984

Approved by William E. Felling Signature WILLIAM E. FELLING Date AUG 29 1984

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ANALYSIS OF INHERENT RISK
CHARACTERISTICS AND RISK VALUES

DOE/CONTRACTOR COMPONENT Oak Ridge Associated Universities

ASSESSABLE UNIT Biological & Environmental Research - HA 02

I T E M	R I S K V A L U E		
	LOW	MODERATE	HIGH
	1	2	3
PURPOSE AND CHARACTERISTICS	SPECIFIC/ LIMITED	BROAD/VARIED X	VAGUE/COMPLES
BUDGET ALLOCATION: FUNDS (000) <u>\$5,134</u> PERSONNEL <u>64.3</u>	SMALL X	MEDIUM	LARGE
PROCUREMENT (000) <u>890.5</u> ASSISTANCE (000) _____	SMALL X	MEDIUM	LARGE
IMPACT OUTSIDE DOE	MINIMAL	SELECTIVE X	MAJOR
AGE AND LIFE EXPECTANCY	STABLE X	CHANGING	NEW
DEGREE OF CENTRALIZATION	FEDERAL CENTRALIZED	FEDERAL DECENTRALIZED X	PARTICIPANT ADMINISTERED
SPECIAL CONCERNS	MINIMAL	MODERATE X	SUBSTANTIAL
PRIOR AUDITS AND REVIEWS	GOOD COVERAGE, FEW DEFICIENCIES X	MODERATE COVERAGE, SOME DEFICIENCIES	MINIMAL COVERAGE, SEVERAL DEFICIENCIES
MANAGEMENT RESPONSIVENESS	EFFECTIVE RESPONSE X	PARTIALLY RESPONSIVE	NOT RESPONSIVE

Performed by Harold Hatmaker Signature Harold Hatmaker Date 8/29/84

Reviewed by William F. Countiss Signature William F. Countiss Date 8/29/84

Approved by William E. Felling Signature William E. Felling Date _____

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ANALYSIS OF INHERENT RISK

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ITEM	RISK VALUE	COMMENTS
Purpose and Characteristics	2	
Budget Allocation	1	
Procurement and Assistance	1	
Impact Outside DOE	2	
Age and Life Expectancy	1	
Degree of Centralization	2	
Special Concerns	2	
Prior Audits and Reviews	1	
Management Responsiveness	1	
	TOTAL 13	

Overall Evaluation of Inherent Risk: Low Moderate High

Performed by Harold Hatmaker Signature *Harold Hatmaker* Date 8/29/84

Reviewed by William F. Countiss Signature *William F. Countiss* Date 8/29/84

Approved by William E. Felling Signature *William E. Felling* Date 8/29/84

QUESTIONNAIRE FOR
EVALUATING COMPLIANCE WITH GAO STANDARDS
OF INTERNAL CONTROL

DOE/CONTRACTOR COMPONENT Oak Ridge Associated Universities

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QUESTIONS	RESPONSE		COMMENTS
	YES	NO	
A. Reasonable Assurance			
1. Do costs of internal control exceed benefits derived?		X	
2. Do controls in place provide a satisfactory level of confidence?	X		
3. Do controls in place allow the probability of detecting waste, fraud, abuse, or error?	X		
4. Do controls in place prevent improper activity?	X		
5. Do controls in place enhance regulatory compliance?	X		
B. Supportive Attitude			
1. Are managers and employees attentive to control matters which promote the effectiveness of controls?	X		
2. Are managers responsive to information developed through internal control reviews, audits or evaluations?	X		
3. Are managers committed to achieving strong management controls through actions concerning:			
a. Organization structure	X		
b. Personnel Practices	X		
c. Communications	X		
d. Periodic accountability	X		
e. Monitoring and report	X		
f. General leadership	X		
1 adequate supervision	X		
2 proper training	X		
3 motivation	X		

QUESTIONNAIRE FOR
EVALUATING COMPLIANCE WITH GAO STANDARDS
OF INTERNAL CONTROLS

DOE/CONTRACTOR COMPONENT Oak Ridge Associated Universities
ASSESSABLE UNIT Biological & Environmental Research - HA 02

QUESTIONS	RESPONSE		COMMENTS
	YES	NO	
C. <u>Competent Personnel</u>			
1. Do managers and employees demonstrate personal and professional integrity?	x		
2. Do managers and employees demonstrate a level of skill necessary to ensure effective performance?	x		
3. Do managers and employees demonstrate a sufficient understanding of internal controls to effectively discharge their responsibilities?	x		
4. Are personnel given the necessary formal and on-th-job training?	x		
D. <u>Control Objectives</u>			
1. Have control objectives been identified or developed for all programs and administrative functions?		x	Will be in place by March 1986
2. Are the control objectives: a. Logical b. Applicable c. Reasonably complete			
E. <u>Control Techniques</u>			
1. Do control techniques in place provide a high degree of assurance that internal control objectives are being achieved?		x	Will be in place by March 1986
2. Are the control techniques in place effective and efficient?			
3. Have the following general control techniques been put in place? a. Specific policies b. Specific procedures c. Plans of organization (including separation of duties) d. Physical arrangements (such as fire alarms)	x x x x		
F. <u>Documentation</u>			
1. Are event cycles, control objectives and techniques documented?		x	Will be in place by March 1986
2. Are all pertinent aspects of a transaction and other significant events documented?	x		
3. Can transactions and related information be traced from beginning to end?	x		

QUESTIONNAIRE FOR
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QUESTIONS	RESPONSE		COMMENTS
	YES	NO	
G. <u>Recording Of Transactions And Events</u>			
1. Are transactions recorded promptly?	X		
2. Have adequate written policies and procedures been prepared describing recording instructions?	X		
3. Are instructions periodically reviewed by a responsible official?	X		
4. Are transactions properly classified?	X		
H. <u>Execution Of Transactions And Events</u>			
1. Are transactions and other significant events authorized and executed only by persons acting within the scope of their authority?	X		
2. Is authorization clearly communicated to managers and employees?	X		
3. Have the responsibilities of each activity of the organization been clearly defined in writing?	X		
4. Has authority commensurate with responsibility been delegated in writing?	X		
5. Are the conditions under which the delegated authority may or may not be exercised spelled out clearly?	X		
I. <u>Separation of Duties</u>			
1. Are duties and responsibilities assigned systematically to a number of individuals to ensure that effective checks and balances exist?	X		
2. Have key duties such as authorizing, approving, and recording transactions; issuing and receiving assets; making payments; and reviewing or auditing transactions been separated?	X		

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QUESTIONS	RESPONSE		COMMENTS
	YES	NO	
J. Supervision			
1. Do supervisors continuously review and approve the assigned work of thier staffs?	X		
2. Do supervisors provide their staffs with necessary guidance and training?	X		
3. Are duties, responsibilities, and accountabilities assigned to each staff member clearly communicated?	X		
4. Do supervisors ensure that work flows as intended?	X		
K. Access To And Accountability For Resources			
1. Is the access to resources and records limited to authorized individuals?	X		
2. Is the accountability for the custody and use of resources assigned and maintained by different individuals?	X		
3. Are periodic comparisons made of resources with the recorded accountability to determine whether the two agree?	X		
4. Is the frequency of comparisons based on the vulnerability of the assets?	X		Frequent comparisons are standard practice, but not motivated from vulnerability
L. Audit Resolution			
1. Do managers promptly evaluate findings and recommendations reported by auditors?	X		
2. Do managers determine proper actions in response to audit findings and recommendations?	X		
3. Do managers complete, within established time frames, all actions that correct or resolve matters brought to their attention?	X		
4. Are managers responsive to findings which produce improvements?	X		
5. Is top management kept informed through periodic reports or discussions?	X		

Original Signed By

Performed by: Harold Harmaker Signature Harold Harmaker Date AUG 29 1984

Reviewed by: William F. Countiss Signature WILLIAM F. COUNTISS Date AUG 29 1984

Approved by: William E. Felling Signature WILLIAM E. FELLING Date AUG 29 1984

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Assessment of Compliance with Standards of Internal Control
Based on Completion of a Vulnerability Assessment

DOE/CONTRACTOR COMPONENT Oak Ridge Associated Universities

ASSESSABLE UNIT: Biological & Environmental Research - HA 02

<u>Standard</u>	<u>Compliance</u> (Yes, No, N/A)	<u>Comments</u>
Reasonable Assurance	Yes	
Attitude	Yes	
Competent Personnel	Yes	
Internal control objectives	No	Will be in place by March 1986
Internal control techniques	No	Will be in place by March 1986
Documentation	No	Except for event cycles, etc., as noted
Recording of transaction	Yes	
Execution of transaction	Yes	
Separation of duties	Yes	
Supervision	Yes	
Access to Resources	Yes	
Audit Resolution	Yes	

OVERALL COMMENTS: _____

Original Signed By
 Performed by Harold Hatmaker Signature Harold Hatmaker Date AUG 29 1984

Original signed by
 Reviewed by William Countiss Signature WILLIAM F. COUNTISS Date 8-2-1984

Original Signed By
 Approved by William Felling Signature WILLIAM F. FELLING Date 8-2-1984